Realities that English Pre-service Teachers Encounter when Conducting Research in a Distance Bachelor's Program[1]

Ortiz-García, W. R.[2]
López-Urbina J. P.[3]

Abstract

This paper reports the results of a qualitative case study conducted with undergraduate students from a distance learning Bachelor's degree program in Foreign Language Education Program with an emphasis on English at a private university in Colombia. This study aimed at depicting realities encountered by pre-service teachers when conducting research in EFL, and how these realities affect their process and therefore their undergraduate research reports. This qualitative study gathered data through interviews, focus groups, observation, and document analysis. The data were analyzed using MAXQDA software. The main findings showed pre-service teachers' difficulties in finding conducive contexts in which to carry out their research, as well as difficulties related to poor time management, inconsistencies between research subjects and curricula, and differences in research tutors' feedback and guidance as factors that might contribute to the production of biased research in the field of English as a foreign language. In conclusion, it is necessary to review institutional higher education policies to determine a range of possibilities to divulge and contribute to the academic field as part of a curricular updating process.

Keywords: distance learning, EFL, pre-service teachers, research in languages, undergraduate research

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Realidades que enfrentan los docentes de inglés en formación en procesos investigativos en un programa de licenciatura a distancia

Resumen

Este artículo presenta los resultados de un estudio de caso cualitativo realizado con estudiantes de una Licenciatura en Lenguas Extranjeras, con énfasis en inglés, en una universidad privada de Colombia. Este estudio tuvo como propósito develar las realidades que experimentan los futuros licenciados al llevar a cabo investigaciones relacionadas con la enseñanza y aprendizaje del inglés como lengua extranjera, así como analizar cómo estas experiencias afectan el proceso y los resultados de la investigación educativa. Los datos se recolectaron a través de entrevistas, grupos focales, observaciones y análisis de documentos, utilizando el software MAXQDA. Los hallazgos principales revelaron las dificultades que enfrentan los docentes en formación para encontrar contextos propicios en los cuales llevar a cabo sus investigaciones. También evidenciaron dificultades relacionadas con la mala gestión del tiempo, inconsistencias entre las materias de investigación y los planes de estudios, así como disparidades en el acompañamiento proporcionado por los tutores de investigación. Todas estas dificultades podrían contribuir a la producción de investigaciones sesgadas. En conclusión, se resalta la importancia de hacer una revisión de las políticas institucionales con el fin de proporcionar un abanico de posibilidades para divulgar y contribuir al campo académico mediante procesos de actualización curricular.

Palabras clave: docente en formación, educación a distancia, inglés como lengua extranjera, investigación en idiomas, investigación en pregrado

Introduction

The Ministry of National Education (Ministerio de Educación Nacional [MEN], 2013) in the National Certification System Guidelines asserts that research is one factor in the evaluation process to certify undergraduate programs. Hence, it aims at promoting inquiry and research education through elective courses, seminars, internships, academic research events, and research strategies. In this sense, undergraduate research is becoming an extremely demanding practice, which in some educative contexts could be working against the generation of new knowledge (Calle, 2013).

Because of the demands of the system, the MEN policies allow institutions of higher education the freedom to establish their own institutional policies regarding undergraduate research, as long as those guidelines are aligned with MEN's (2013, 2022) policies. Some of these accommodations have to do with the establishment of strategies in undergraduate research and innovation; the development of Information and Communication Technologies (ICT) environments; synchronous or asynchronous interaction between students and research tutors; and the organization of research groups and fields according to the modality, with a particular focus on distance learning in particular (MEN, 2022).

In the context of this study, conducting research is an undergraduate degree requirement. Despite being only one of the options provided by the MEN's (2013, 2022) policies, researchers observed a tendency towards monographs in distance B. Ed. Programs. Moreover, scholars have identified a prevalent issue of pre-service teachers encountering challenges in adhering to and effectively conducting their research processes.

Accordingly, the research question that guided this study was as follows: What are the realities faced by pre-service teachers when conducting research in distance education within an English B. A. program? By analyzing these realities, this study seeks to identify areas of improvement so that they can be considered when guiding distance pre-service teachers in conducting their first research exercises.

Theoretical Framework

The theoretical framework provides an in-depth analysis of the principal theoretical underpinnings related to research in education, undergraduate research in languages, and distance education, since these are part of the research question as well the objective of this study.

Research in Education

Educational research could be defined as a systematic process, a logical activity, an empirical undertaking, a reductive process, and a replicable and transmittable process which aims to encompass a scientific method, hypothesis, or treatment group. Studies should be able to be replicated and generalized and should adhere to rigorous standards in design, method, and the interpretation of results (Ciraso *et al.*, 2022; Tuckman & Harper, 2012). Therefore, educational research is a practice in the current curricula of universities to guarantee quality training and provide pre-service teachers benefits in their future performance, in this case, as teachers.

Universities and colleges in Colombia promote undergraduate research as part of curricula. In this view, the Institute of Education Sciences & National Science Foundation (2013) provides six basic types of research in education. Foundational research enhances fundamental knowledge for educational improvement; early-stage research explores connections among educational concepts, laying the groundwork for future interventions; design and development research creates solutions to enhance education goals; efficacy research tests strategies under ideal conditions, while effectiveness research assesses real-world scenarios; and scale-up research evaluates interventions across diverse populations and contexts without extensive researcher involvement (Institute of Education Sciences & National Science Foundation, 2013).

Educational research (ER) is different from other types of research that deal with inanimate intangibles like point masses or rigid bodies, such as research in physics, as ER deals with humans, human behaviors, and the learning organizations of which they are a part. As such, a code of ethics and morals demands that it be conducted differently given the nature of human beings themselves (Wellington, 2015). This construct is important since this study is the result of an educational study that provides meaningful results in the foreign languages research practices field.

Undergraduate Research in Languages

According to Borg & Liu (2013), research by language teachers began in the 1980s to improve language teaching through action research. Nowadays, conducting research in this field encompasses not only different approaches but also different areas, including language, literature, linguistics, and skills development. These areas can be further divided into sub-disciplines. Clark *et al*. (2022) notes that "the predominant mode of formal undergraduate research within literary studies is the dissertation/thesis and small-scale research" (p. 5), offering a wide variety of possibilities in terms of interests, topics, and approaches for students in the B. Ed. Program. Muhartoyo (2007) outlines four research methodologies that students can use when conducting research within the field of language studies: experimental, quasi- or pre-experimental, ethnography, and case study. The four previous methods can equip students with various useful tools for conducting language research in a simple way. However, language development is a complex system, and it would oversimplify to confine the language research to just four methods.

> Eight methodological principles have been offered for language development research, including (i) ecological validity (context is essential) (ii) complexity (reductionism avoided), (iii) dynamic processes (changing relationships among variables), (iv) reciprocal causality (events having many interconnected antecedents), (v) co-adaptation (systems causing coevolution in each other), (vi) collective variables (variables showing the interaction among multiple systems over time), (vii) heterochronic analysis (linkages analyzed across levels and timescales), and (viii) variability (variability essential and expected around stabilities, rather than noise or measurement error) (Larsen-Freeman & Cameron, as cited in Nimehchisalem, 2018, p.32).

Currently, many language studies are conducted as a result of teachers' interventions aimed at effectively addressing language phenomena for research purposes. According to Phakiti (2015), some characteristics of language research are specific, individual, and environmental aspects of language use, description of phenomena in learning languages, understanding the development of language learning and its variations, prediction of future changes, stages, or success in language learning students in the B. Ed. Program, and incorporation of knowledge or theories in language classes. This research process serves as a valuable source for analyzing and interpreting information, as well as suggesting and redirecting practices in foreign language matters. As Nimehchisalem (2018) emphasized that the complexity in the languages field calls for research methods capable of accommodating the dynamic, nonlinear, and open way in which language learning is viewed. Therefore, the methodological principles shared in this section are not affirmed to be exclusive to the field of language research; rather, they can serve as methodological references depending on the data and objectives of language research.

Distance Education

Distance education has emerged as a viable alternative to traditional classroom education. It has been acknowledged as a means to provide access to education to underprivileged and remote regions, enhance development, promote social mobility, and offer flexibility to learners (Galvis & Carvajal, 2022; Marchisotti *et al*., 2022; MEN, 2022). However, for this modality of education to be effective, it must meet certain requirements, such as face-to-face and virtual guidance, and quality conditions that are consistent with the social, cultural, and environmental demands of the context (MEN, 2019, p. 4). This can be achieved through a culture of constant self-assessment, internal and external evaluations of training, research, cultural, academic, and extension dynamics, which promote continuous improvement and ensure the relevance of academic programs (Marchisotti *et al*., 2022; MEN, 2022).

Some studies have revealed a discernible bias and inadequate credibility towards the effectiveness of distance learning in enhancing the academic performance of pre-service teachers. This is largely due to the limited understanding of the pedagogical underpinnings that undergird this mode of learning (Galvis & Carvajal, 2022; Marchisotti *et al*., 2022). Nonetheless, countries around the globe have capitalized on recent technological and social changes to promote this educational model. This is because it offers an opportunity to personalize learning, encourages innovation and creativity in the development of teaching and learning materials, and expands access to tertiary education in remote areas (Guillén *et al*., 2021; Galvis & Carvajal, 2022; Marchisotti *et al*., 2022).

Likewise, other studies have highlighted the virtues of distance education in promoting academic support in learning and research processes, and even better results for students, through effective pedagogical models adapted

to the needs and contexts of the students (Guillén *et al*., 2021; Galvis & Carvajal, 2022). Therefore, it is necessary to analyze alternative ways of carrying out research processes within distance modalities and the aspects that educational actors must consider promoting educational research at all educational levels.

Data Collection and Analysis

This investigative study employs a qualitative approach, as it provides flexibility in exploring various perspectives of the phenomenon or problem through qualitative data (Busetto *et al*., 2020). Thus, the study is framed as a case study, enabling researchers to address the phenomenon through the collection of unstructured data from primary sources. This approach facilitates researchers in gaining comprehensive insights into the realities of pre-service teachers, their vicissitudes, and the challenges they encounter in distance education. To do so, researchers used a triangulation process, which offered a diverse range of perspectives, contradictions, and alternatives to explicate the targeted phenomenon (Merriam & Tisdell, 2015).

Participants and Setting

Sixty undergraduate students from the Bachelor's in Foreign Language Education Program at a private University in Colombia participated in this study. They were pre-service teachers in their 9th semester who were enrolled in the final of three research classes and were in the process of developing their final research paper required for graduation. Students in the B. Ed. Program in this sample are studying distance modality and are located in different cities and regions of Colombia, with 62% of the participants in rural areas. The age range of the participants is between 20 and 50 years, with most undergraduate students already employed as teachers. All participants were informed about and provided consent for the use of the information collected in the results through an e-consent form. Anonymity is ensured to protect the participants' identities.

Data Collection Instruments

A semi-structured interview was conducted with the aim of engaging in informal conversation to understand peoples' experiences and points of view, as well as to identify the related aspects that could influence the research process of pre-service teachers (Busetto *et al*., 2020). The pre-service teachers shared their thoughts, experiences, and challenges related to researching, not only as distance students but also as amateur researchers in general. Subsequently, two 1.5-hour focus groups were organized, during which open-ended questions were used to gather data and understand the difficulties they encountered in conducting research.

Class observations were conducted via video recording from August 2021 to June 2022. Throughout this period, the authors made detailed field notes based on their observations of the recorded classes. These notes were then utilized to identify and analyze topics related to the realities of pre-service teachers and their research process, as outlined by Canals (2017).

Table 1. *Demographic information of the participants*

Participants	Sample	Age	Gender		Location	Zone	
			Male	Female		Urban	Rural
Pre-service teachers	60	20 – 30 (45 ss) 31 – 40 (12 ss) 41 – 50 (3 ss)	13	47	Villavicencio 9 ss, Bogotá 13 ss, Manizales 4 ss, Bucaramanga 8 ss, Cali 3 ss, Cúcuta 8 ss, Tunja 5 ss, Chiquinquirá 4 ss, Pasto 1 ss, Medellin 5 ss.	23	37

Note. Ss = students

Alongside the instruments, data collection was also done through document analysis. Documents guide researchers through the understanding of relevant insights to the research problems and help uncover concepts and meanings (Bowen, 2009; Merriam & Tisdell, 2015). The research submissions of pre-service teachers in the consolidation process of the paper and the proposals were analyzed as documents. Participants developed their research proposals and submitted drafts to the researchers, which were used as a source of information for the study.

Data Analysis and Discussion

The data analysis was based on grounded theory (GT) understood as a method of comparative analysis with specific procedures to be followed and able to generate an emerged theory from the data (Tarozzi, 2020). This analysis was employed to elucidate the phenomena described in this research.

Data were analyzed through the codification of the most repeated patterns using the software MAXQDA. Three main categories emerged from the codified data. The information was juxtaposed through triangulation understood "as a method used to increase the credibility and validity of research findings" (Noble & Heale, 2019, p. 67). The validity arose from methodological triangulation using different qualitative methods to establish the findings (Golafshani, 2003).

The findings were categorized and shared as follows:

Table 2. *Resulting categories and themes*

Categories	Themes in the Data	Data Codes
Context and time embody pre-service teachers' first-hand limitations to research.	Contextual Constraints on Research for Pre-service Teachers	*Steady Context vs. Changing the Context in Research *Challenges in Obtaining Authorization for Research in Educational Settings *Impact of Contextual Challenges on Research Duration
	Time Management and Engagement in Research	*Influence of Work and Job Changes on Research Pursuits *Balancing Academic, Work, and Extracurricular Activities *Impact of Time Limitations on Research Productivity and Outcomes
	Perception of Research in Pre-service Teacher Training	*Type of Research Conducted by Pre-service Teachers (Narrative vs. Action Research) *Perception of Research as a Complementary Part of the students' Training
Disparities between the Research Process and Curriculum	Research Classes and Curriculum Integration	*Perception of Research Classes as Disjointed from Curriculum *Disparities between Research Subjects and Curriculum
	Challenges in Research Application and Engagement	*Challenges in Applying Research Knowledge to Daily Activities *Participation and Engagement in Research Classes *Impact of Distance Learning on Research Engagement
	Motivation, Benefits, and Use of Research	*Pre-service Teachers' Preferences for Language Proficiency over Research *Usefulness of Research Knowledge *Benefits and Skills Developed through Undergraduate Research *Optimal Progress in Research through Integration with Daily Activities
Pre-service teachers' confusion emerged from Research tutors' Feedback and Guidance.	Feedback and Guidance in the Research Process	*Stages in the Research Process *Exposure to Different Educators' Criteria *Challenges Faced due to dissimilar Feedback from Research Tutors *Consistency vs. Different Perspectives of Research Tutors *Linear Guidance vs. Non-linear *Synergy between Pre-service Teachers and Research Tutors for Paper Consolidation

Category 1: Context and Time Embody Pre-service Teachers' First-hand Limitations to Research

The first issue that undergraduate students face is conducting their initial research in academic formal and informal contexts where they are developing their investigation, considering the formal context as the institutional scenarios framed in the school, and the informal context as that one they interact with in social, cultural, and environmental realities (Sobe & Kowalczyk, 2012). Most of the participants do not have a steady context, as their opportunities are defined within the practicum subjects linked with the curriculum that MEN (2015a, 2015b) has set as a requirement to complete studies or obtain their degree. The pre-service teachers have two practicum subjects in the languages bachelor in which they can conduct research exercises. However, the context might change from one class to another, implying that the context is not always the same, even when conducting their final research study. This affects the development of research with pre-service teachers.

> I have a problem… I've changed my job a couple of times and it is tough because it made me change my research purposes again and again. For me, doing research is difficult because I've constantly changed the context. (GC, FG, October of 2021)[4].

A large percentage of the participants reveal that they are working as teachers already and are pursuing the undergraduate program in order to work. Most of them are employed in the private education sector in Colombia and frequently relocate for work. That is to say, the context in which they operate is one of the main reasons why conducting the research might be challenging for them.

> My problem is that I am working as a teacher. When I started my research proposal development, I had a crystal-clear understanding of the problem, the research statement, etc. But I had to move to another job and everything changed. In that way, it is hard to continue with the study. (LP, FG, October of 2021)

In the spite of the above, the identified issue tends to exacerbate when they need to gather information in the context and/or obtain authorization to do it.

> I have found that there are some external problems. Sometimes both the school administration and the parents do not authorize us to make observations, which is complicated. From my experience, people get scared when they hear the word "research". In fact, there was once a teacher who got upset because I was observing her class. She did not want me to be there. (ES, Int., June of 2022)

The previous matter affects the normal development of research, and it becomes a reason why conducting studies of this type can take too long.

The participants from this study expressed that even though the context is somewhat hard to handle, they are still willing to conduct research. The problem related to the context is worth sharing due to the need for increasing awareness about the importance of local and national educational contexts for research matters, as this might lead to reforms in education (Crossley, 2010; Le Fanu, 2010). More information about the contextual situations in educational settings "should be provided for practitioners and policymakers to enable the latter to make more informed policy decisions" (Cukurova *et al*., 2018, p. 14).

In agreement with the previous authors, some pre-service teachers have expressed concerns regarding their inability to conduct research due to the absence of a suitable context. Nevertheless, it is worth noting that some of these pre-service teachers are full-time students, which may result in a lack of formal educative context. As a potential solution to overcome this obstacle, conducting autobiographies research in informal contexts could be considered. However, it is imperative for these pre-service teachers to critically assess the worthiness of their autobiographies study before undertaking it. In comparison, some of the pre-service teachers who have a formal educative context tend to develop action research since they want to intervene with their teaching or language skills purposes. For that matter,

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4. To protect the sample's confidentiality, the participants will be identified using the first letter of their first name and the first letter of their last name. For instance, Luis Pérez as LP. FG = focus group; Obv. = observation; Int. = interview; Doc. analysis = documents analysis.

having or not having a formal educative context might be a biased factor to determine the type of research in distance education (Obv., 2021-2022). As mentioned above, the type of research conducted by distance pre-service teachers might not be the result of a rigorous intervention in their contexts but a mere consequence of fulfilling a requirement.

In addition, the second issue identified was time management and engagement, specifically regarding the amount of time participants dedicated to research. Firstly, it should be noted that most students in the B. Ed. Program hold full-time jobs and are involved in time-consuming extra-curricular activities. These students face time constrains in completing their major, so they must manage their time appropriately (Ortiz, 2020).

> Time management is one of the hardest parts of this modality. For several reasons, it is difficult to spend time on research issues. Research takes a lot of time and I have to create strategies to fulfill all of my duties. I work and study as well, so I don't have too much time to research. (CD, Int., June of 2022)

The students in the B. Ed. Program are tasked with carrying out multiple activities, not limited to academic ones. Participants are undoubtedly aware that this process demands ample time to read and consult theories and databases. In coherence, Bocar (2009) stated that a great percentage of pre-service teachers encountered problems with the time to finish their studies/projects. It does not imply a lack of interest, since the participants are willing to learn, but throughout the process, they might lose interest in their research as a result. This can be seen as one of the main realities in research: the lack of effective time management does not allow researchers to contribute to research productivity (Chase *et al.*, 2012). This suggests that the studies conducted by pre-service teachers might not be as productive as they could be.

Effective time management allows researchers to maintain focus on their work, contributing to research productivity.

Here are some opinions shared by pre-service teachers in this regard:

> Research is a process that requires a considerable amount of time to get started, and it is necessary to search for literature or theories to support the research… the application of research requires a lot of time… if we talk about research in education, there is not enough time to carry it out due to the need to comply with the curricular programs established by the institutions. (EA, Int., June of 2022)

Occasionally, the pre-service teachers asked for some deadline extension to submit the assignment. They argued not to have time enough to fulfill with assignment entirely, claiming to also have difficulties selecting and consolidating the information needed. In some cases, the pre-service teachers submitted the papers developed slightly, the process took extra time because the PST had to work on corrections and suggestions to improve the paper and the research process was delayed (Doc. analysis, 2021-2022).

Consequently, the pre-service teachers may show curiosity about research matters, but this interest tends to vanish when encountering time as a barrier. To some extent, it should be clarified that most of the pre-service teachers found the research process to be a complementary part of their training. Besides, the time in this modality is valuable since the students have many duties to deal with and found research to be a demanding process. The educational research approach is somewhat well suited for the student's level of training, but not because they perceive it as an extremely meaningful activity that demands too much of their time. In distance learning, time is a key element that might pave the way for successful research studies, as pre-service teachers in this modality are not solely focused on their studies, as can be the case with face-to-face students.

Category 2: Disparities between the Research Process and Curriculum

There are some matters that pre-service teachers consider to be missing links in their research learning process. To start with, pre-service teachers have identified a disparity between the research subjects and their curriculum. They do not perceive the research classes as something meaningful that goes beyond the consolidation of their research study, viewing these classes as disjointed from the others in the curriculum.

> We understand research classes as simply another subject we have to take. That's it. Those are not linked to other ones. We learn things and then we forget them, as they are not used along the program; just at the end, when we have to develop our research study. (GR, FG, October of 2021)

The pre-service teachers have attested that there exists a dearth of connection between the research classes and the curriculum. They express encountering too much theory and barely applying all the knowledge they have acquired in research subjects in their overall academic training.

The preceding fact is juxtaposed with claims that curricula should be based on research, among other reasons, because research involves the creation of knowledge, resulting in a curriculum production process that should be shared (Clements, 2007), and research tutors must help pre-service teachers understand the relationship between their relevant role in a research task and its larger goals to keep motivation (Morrison *et al.*, 2020).

Most participants of this study prioritize linguistic classes and those in which they might improve their proficiency in the target language over research: "I personally do not like doing research. I prefer to have good English proficiency" (SV, FG, October of 2021).

When asked if research knowledge is helpful for classes other than research-oriented ones, they argued:

> What I've learned in developing my thesis has nothing to do with my job… it is not something that I can match with my daily activities. This is just theory. In class we are focused on the practice. (SA, Int., June of 2022)
> I just want to do research in my profession as a teacher when I do research to implement something new and different in my class, but not this kind of intense and complicated research. (VR, FG, October of 2021)

In the same vein, it was observed in classes that the participation of pre-service teachers is limited when they must discuss about the theoretical underpinning of the research subjects in comparison to when their interventions have a communicative purpose or are oriented to advance in their language skills (Obv., 2021-2022).

Most pre-service teachers expressed overall difficulties in this field, which is one of the reasons why the process of research might take too long to develop for some of them. Some pre-service teachers choose to conduct research to meet their degree requirements, but it is not a goal for most of them.

On the other hand, seventeen out of sixty participants expressed that they find research interesting and benefit from research experiences. Though most of the distance learning, pre-service teachers express little enthusiasm toward research, they are aware of the benefits, claiming the following:

> It is undeniable that the experience in the different kinds of research classes has been positive, constructive, critical, and enriching. Especially, during the process of my research study carried out since it has allowed the consolidation of critical thinking skills and a constructive spirit of research matters. (CN, Int., June of 2021)

In some specific cases, when the pre-service teachers have to use the research knowledge in other classes, they find useful what they have learned. Thus, the assignments that include the design of instruments such as interviews or surveys were easier for them to develop since they have designed similar assignments in other classes as well as the application of APA rules depending on the type of task. For instance, a theoretical framework construction, a research design analysis, or a specific research process such as codification or triangulation of information are processes that the pre-service teachers seldom use in other classes. As a result, carrying out research processes becomes a difficult task for them (Doc. analysis, 2021-2022).

In some cases, few pre-service teachers found the research knowledge useful in some way. A significant number of students are overwhelmed by the academic process in this matter but when they get involved in research, they develop skills that relate to other aspects of their lives.

I must say that from the research seedbed to my research classes, they were very good and forceful. I became an organized and disciplined person; I spent two hours every night and all weekend and I knew I had to respect that. (MO, Int., June of 2021)

In agreement with other studies, the benefits of undergraduate research are numerous and far-reaching, including learning the balance between independence and collaboration, helping students explore career fields, and develop independent critical thinking skills (Lopatto, 2010; Madan & Teitge, 2013; Petrella & Jung, 2008).

Due to their multiple duties, pre-service teachers who engage in research in this modality can enhance their willingness to conduct research by connecting their research studies with their daily activities, such as work and general live. Therefore, when the students in this modality integrate their research studies with their daily lives, the research process becomes optimal. They are able to relate theory to practice, which assists them in conducting the research process effectively.

I am an entrepreneur; I am working with children. I teach them English. I could connect my research study with my business and now the time that I have to investigate would be almost the same as the time I am with the kids. (CN, Int., June of 2021)

Findings reveal how these last student can have optimal progress by leveraging both academic and daily elements to fulfill all of their everyday duties (Obv., 2021-2022).

The outcomes of the study underscore the significance of incorporating undergraduate programs in foreign languages under the distance modality that establish a more direct correlation between the needs of the students and the curriculum. Such an approach has the potential of yielding valuable contributions from students that can be further enhanced and utilized in both formal and informal educational contexts. By doing so, the products of students' research can be promoted, and their contributions to the research field, as well as other elements of the study plan, could be maximized.

Category 3: Pre-service Teachers' Confusions Emerged from Research Tutors' Feedback and Guidance.

In the case of the bachelor's degree program at the private university under examination, the research process entails three pivotal stages: firstly, the exploration of the research subject; secondly, the assignment of the pre-service teachers to guide their study; and finally, the submission of the final research study for review by a faculty committee, which will offer corrections or adjustments as needed.

Pre-service teachers are subjected to various educators' criteria and assessments to be guided throughout this process. Consequently, they may become confused about research matters because they receive conflicting feedback, potentially making research difficult in the distance modality.

When asked about the synergy between different guidance from research tutors, pre-service teachers affirmed:

There is coherence in the concepts used in the research. None said something different to regard with the way the research in the program is conducted… They all have the same concept about what "action research" or "case study" means but regarding the feedback everything changes abruptly. (CD, Int., June of 2022)
I don't understand why, if one professor has said something is good, the next one tells me it isn't. It implies that what I had done needs to be changed. (GR, Int., June of 2022)

Pre-service teachers found that the research terminology remains consistent in terms of definitions and conceptual meanings. However, they have found that research tutors hold varying visions and perspectives on research issues. Consequently, each tutor guides pre-service teachers according to his/her research perspective, resulting in differing feedback.

In general, pre-service teachers do not find the guidance provided by the research tutors to be coherent with the research criteria established by the program. Independent of the content of the research classes, the participants of this study found dissimilar points of view among tutors regarding feedback. This resulted in conflicting guidance for pre-service teachers throughout their studies. Some students expressed difficulty in putting research theory into practice and thus meeting the criteria for developing undergraduate research projects in their major.

It was identified that some pre-service teachers have difficulties with how they are told to conduct research and how research is conducted in reality. Participants follow the research process as they are told to conduct it. However, when they are in a different stage of their research process or the research tutor is changed, they are forced to restate their study or discard the advances achieved up to that point (Obv., 2021-2022).

One of the main objectives of feedback in conducting research is to assist pre-service teachers in consolidating their final papers. As stated, "feedback is an effective way to further enhance [pre-service teachers'] reflective learning in undergraduate research. In particular, provision of feedback from mentors is essential for promoting pre-service teachers' deep approach to learning" (Imafuku *et al*., 2015, p. 54). In this regard, the participants of this study found that the discrepancy in the feedback–as a barrier that impedes their progress towards successfully completing this process.

> Each research tutor has a set of objectives to guide the classes according to the curriculum; they explain them based on how they understand them, but the feedback provided is different. The research tutor teaches the curriculum [to reflect] how they think Research is and for that reason, feedback provided is not the same, some of them say something in one way and others in a different way. So, should research be understood in different ways? Should it change depending on who teaches the class? (SF, Int., June of 2022)

This excerpt from an interview exemplifies why pre-service teachers struggle to comprehend the systematic process that encompasses the scientific method, which can be replicated and generalized with rigorous standards in design, method, and the interpretation of results, as can be found in educational research, and applied in their own research exercises (Ciraso *et al*., 2022; Tuckman & Harper, 2012)

Moreover, pre-service teachers might get information from diverse research stances and with such a varied perspective, they lose interest in researching. This can be one of the reasons why pre-service teachers might not continue in research processes, mainly due to the lack of coherent guidance or clarifications on how to conduct research properly, as stated in the following excerpt:

> I did a process with my mentor and then, when I submitted my study to the faculty committee, they suggested that I change a lot. I respect both, my mentor, and the committee members, but I don't get why there was such a difference in their points of view nor why my research study had to change in such a way… I trust my mentor; however, I did not find synergy in their research stances… It is frustrating (AC, Int., October of 2021)

The process of the pre-service teachers tends to progress when they received the continuous guidance of their mentors. Yet, the consolidation of the paper is evident when pre-service teachers and research tutors are in synergy in terms of the deadlines for submissions and suggestions provided to improve the paper. Both sides follow their path and try to respect it.

In this interview, the feedback encountered by the pre-service teachers is not the same, so these students are aware that research tutors, acting as jurors, have different approaches but share the same target. Nevertheless, when significant differences in feedback arise, pre-service teachers begin to lose motivation for research. Initially, they think that the research process must be done according to the preferences of the educator in charge, and they try to follow their recommendations. Yet, towards the end of the process, they may become frustrated as they realize they lack a solid understanding of research as a systematic process, which involves solving a problem, through thorough data collection and analysis, supported by methods and approaches framed upon in particular ontological and epistemological underpinnings used in their research exercises (Nimehchisalem, 2018).

When educators work together, the guidance provided to the pre-service teachers becomes more meaningful as the criteria, assessment, and feedback are aligned. Consequently, participants found that it was not a big deal to manage any differences. The synergy between the research tutors who teach the research classes is extremely necessary to help pre-service teachers successfully finish their study (Obv., 2021, 2022).

Undoubtedly, research should be concise, clear, and accurate. Oluwatayo (2021) affirms that validity and reliability are touchstones of all types of educational research. It must be conducted not based on the research tutors' preferences, but on its reliability and validity according to the research process and it cannot be a reason that student researchers stop researching.

Accordingly, it is not a matter of unifying all the research tutors' feedback because, through the different stances and perspectives, the research studies conducted by the pre-service teachers might get enriched and complemented properly.

The feedback provided should be helpful for the pre-service teachers to conduct research studies effectively. However, this must not be used to get pre-service teachers confused. For that matter, the pre-service teacher did not find the feedback as a useful ally to improve research practices but as a barrier that make the process harder to conduct or understand.

Conclusion and Implications

To conclude, the main issue that pre-service teachers are facing in conducting undergraduate research is not the research itself but how they are approaching it. The primary challenges in distance learning include time management due to the multitude of activities participants engage in, as well as the absence of suitable environments and contexts for conducting research. Although the participants in this study have appealing scenarios to report results, the aforementioned situations are obstacles that might interfere in their research exercises. Likewise, the concern with the lack of formal educational contexts directly affects the type of research conducted by pre-service teachers. Indeed, it impedes the conduction of action research or ethnographic studies but fosters the realization of autobiographic studies, which in some cases results in the development of biased investigations.

Additionally, it is important to reassess the current needs of students, so the research field can be worked in synergy with the other subjects from the curriculum. This would help pre-service teachers recognize the connection between the knowledge and the contributions they can provide to both formal and informal contexts. Besides, the differences in feedback provided to the pre-service teachers confuse them about the research path. For that reason, when the pre-service teachers are exposed to dissimilar feedback, the research process tends to be more demanding, and not having clear guidance causes them difficulties conducting and understanding this process properly. Therefore, pre-service teachers might feel discouraged from doing similar research exercises.

Consequently, the institutional policies for the regulation of research in the curriculum should be revised in the institution where this study was conducted. This study reveals the well-known benefits resulting from the research processes. Although pre-service teachers have several possibilities to fulfill the research degree requirement in their programs, most of the options are related to research practices, implying that the educational system is forcing the pre-service teachers to research. From the pre-service teachers' perspectives, undergraduate research is not an option but a compulsory activity to be carried out which makes this research practice can be long and demanding stage of educational training for most of the pre-service teachers in this modality.

This begs the question: Should it be mandatory for every student to conduct research? Educational policies require research processes to be part of the program and the universities fit this rule according to their own institutional policies. Nevertheless, it should be stressed that not all pre-service teachers become researchers. That is to say, the pre-service teachers cannot avoid the research requirement, but the reality is that based on the previous arguments emerged from data; they might not be interested in this matter which means, that they look for different options such the link of research requirements with their entrepreneur activities; these are found to be an option to be considered by this institution in order to broaden the graduation choices.

Research matters in distance learning programs should be structured based on the pre-service teachers' realities as many of the students in the B. Ed. Programs are not going to continue in research, as they have expressed the desire to become classroom educators. The previous argument does not mean that the institutional policies must not include research matters as part of the curricula, but they should be more flexible, and requirements should consider by the students in B. Ed. Programs' needs.

By the same token, the research knowledge provided in classes is needed to be more practical than theoretical to supply students with the B. Ed. Programs' research practices with a great impact. Pre-service teachers in distance learning tend to be more practical due to their contexts to conduct research or living contexts.

Finally, it is worth noting that this report does not delve into the personal or professional stance of the researcher who conducted this study regarding the research processes in undergraduate programs in distance learning or formative research training. Rather, it presents the result of a specific case study on this topic.

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